

**ELECTROCHEMICAL SENSOR INK COMPOSITIONS, ELECTRODES,  
AND USES THEREOF**

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**ABSTRACT**

The invention is directed to conductive polymer compositions, catalytic ink compositions (e.g., for use in screen-printing), electrodes produced by deposition of  
10 an ink composition, as well as methods of making, and methods of using such compositions and electrodes. An exemplary ink material comprises a metal catalyst (e.g., platinum black and/or platinum-on-carbon), graphite as a conducting material, a polymer binding material, and an organic solvent. In one aspect, the polymer binding material comprises a polymer binder blend comprising first and  
15 second polymers, wherein the first polymer has a glass transition temperature higher than the second polymer. In a second aspect, the polymer binding material comprises a hydrophilic acrylic polymer, copolymer, or terpolymer. The conductive polymer compositions of the present invention may be used, for example, to make electrochemical sensors. Such sensors may be used, for  
20 example, in a variety of devices to monitor analyte amount or concentrations in subjects.